

(19)日本国特許庁(JP)

(12) 公開実用新案公報(U)

(11)実用新案出願公開番号

実開平5-95178

(43)公開日 平成5年(1993)12月24日

(51)Int.Cl. <sup>4</sup>	識別記号	庁内整理番号	F I	技術表示箇所
H 0 2 K 7/14	A	6821-5H		
5/04		7254-5H		
23/04		6821-5H		

審査請求 未請求 請求項の数1(全2頁)

(21)出願番号 実願平4-44367

(22)出願日 平成4年(1992)5月18日

(71)出願人 592138396

大平 秀明

東京都福生市加美平2-11-15 マルベリ  
ーハイツ302

(72)考案者 大平 秀明

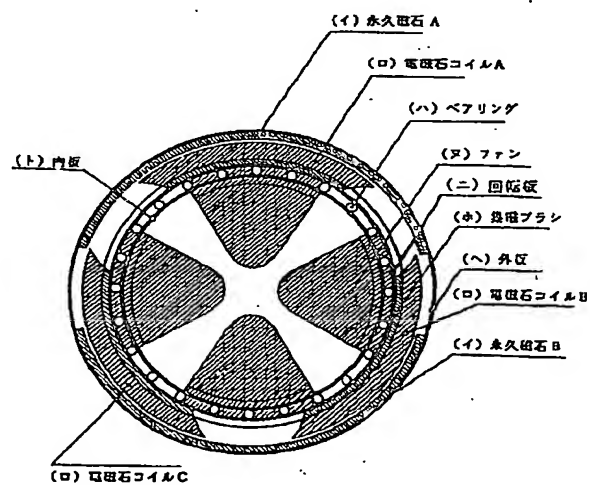
東京都福生市加美平2-11-15 マルベリ  
ーハイツ302

(54)【考案の名称】 中央空洞式モーターと換気扇

(57)【要約】

【目的】 中央にモーターがないので、効率の良い換気ができて、また小さな穴も効率のよい換気ができる。

【構成】 (リ)の電極より(ホ)の集電ブラシを通して電流を流すと(ロ)の電磁石コイルA、B、Cに電流が流れ電磁石となり、(ヘ)の外板に固定してある永久磁石A、Bと反発しあい(ニ)の回転板(ロ)の電磁石コイルが回転してモーターとなる。従来のモーターには中央に回転軸があり、このモーターはこのこの回転軸を(ト)の内板が代行しており(ハ)のベアリングで摩擦を解除しており、(チ)の空洞を一杯に利用した換気の特徴としている。



1

【実用新案登録請求の範囲】

【請求項1】 (リ)の電極より(ホ)の集電ブラシを通して電流を流すと(ロ)電磁石コイルA, B, Cに電流が流れ電磁石となり、(ヘ)の外板に固定してある永久磁石A, Bと反発しあい(ニ)の回転板(ロ)の電磁石コイルが回転してモーターとなる、これに(ニ)の回転板に(ヌ)のファンを取り付けると換気扇となる。

【図面の簡単な説明】

【図1】本考案のモーターの正面図である。

【図2】本考案のモーターの側面図である。

【図3】本考案のファンを付けた正面図である。

2

\*【図4】本考案のファンを付けた側面図である。

【符号の説明】

(イ) 永久磁石A, B,

(ロ) 電磁石コイルA, B, C

(ハ) ベアリング

(ニ) 回転板

(ホ) 集電ブラシ

(ヘ) 外板

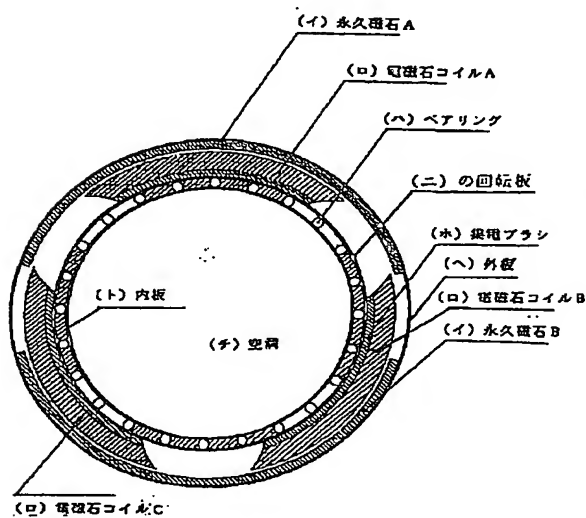
(ト) 内板

10 (チ) 空洞

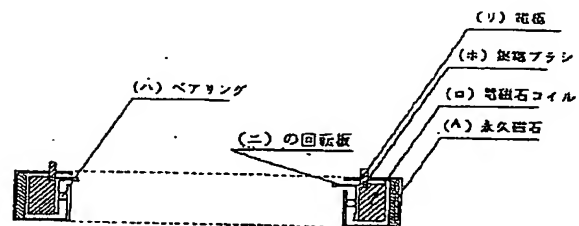
(リ) 電極

\* (ヌ) ファン

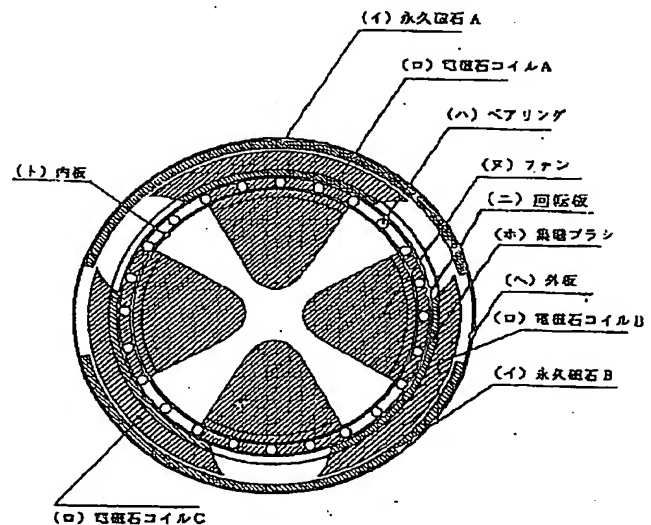
【図1】



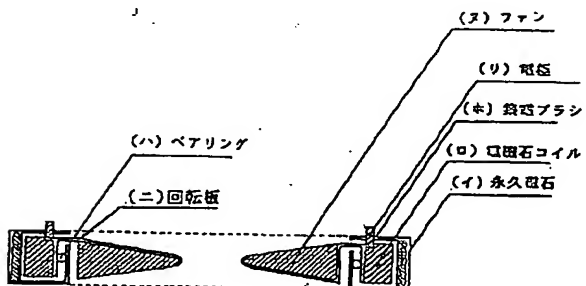
【図2】



【図3】



【図4】



## 【考案の詳細な説明】

【0001】

## 【産業上の利用分野】

この考案は、従来の換気扇の中央よりモーターを取り除いた換気扇である。

【0002】

## 【従来の技術】

中央にモーターがある換気扇である。

【0003】

## 【考案が解決しようとする課題】

これには次のような欠点があった。

(イ) 中央にモーターがあり効率のよい換気ができない。

(ロ) 小さな穴は換気ができない。

【0004】

## 【課題を解決するための手段】

従来のモーターは回転軸が中央にあったがその軸を取り除き (ト) の内板と (ハ) のベアリングが回転軸の役割を果たしており, (リ) の電極より電流を流すと (ホ) の集電ブラシを通り, (ロ) の電磁石コイル A, B, C が電磁石となり (イ) の永久磁石と反発しあい, (ニ) の回転板と (ロ) の電磁石コイルが回転してモーターとなる。これに (ニ) の回転板に (ヌ) のファンを取り付けると換気扇となる。

【0005】

## 【作用】

(リ) の電極より集電ブラシを通して電流を流すと、(ロ) の電磁石 A, B, C が回転してモーターとなり、(ニ) の回転板に (ヌ) のファンがついており換気扇となる。

【0006】

## 【実施例】

以下、本案の実施例について説明する。

(イ) の永久磁石 A, B, を (ヘ) の外板に固定する、(ト) の内板は (ハ)

) のベアリングで回転摩擦を解除する。

(リ) の電極より (ホ) の集電ブラシを通して電流を流すと、(ロ) 電磁石コイル A, B, C を電流が流れ (イ) の永久磁石 A, B と反発しあい、回転板 (ニ) と集電ブラシ (ホ) と電磁石コイル (ロ) A, B, C が回転してモーターとなる。これに (ニ) 回転板に (ヌ) のファンを付けてれば換気扇となり、中央が空洞の換気扇ができる。

【0007】

【考案の効果】

中央のモーターを取り除いたので、効率の良い換気ができる、また小さい穴の換気もできる。

\* NOTICES \*

JPO and NCIP are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

CLAIMS

---

[Utility model registration claim]

[Claim 1] It will become a ventilating fan if the fan of (j) is attached in the rotor plate of (d) at this which a current will flow in the (b) electromagnet coils A, B, and C, and will serve as an electromagnet if a current is passed through the collecting brush of (e) from the electrode of (Li), and it opposes with the permanent magnets A and B fixed to the shell plate of (\*\*), and suits, and the electromagnet coil of rotor plate (b) of (d) rotates, and serves as a motor.

---

[Translation done.]

\* NOTICES \*

JPO and NCIP are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

DETAILED DESCRIPTION

---

[Detailed explanation of a design]

[0001]

[Industrial Application]

This design is the ventilating fan which removed the motor from the center of the conventional ventilating fan.

[0002]

[Description of the Prior Art]

It is the ventilating fan which has a motor in the center.

[0003]

[Problem(s) to be Solved by the Device]

This had the following faults.

(b) There is a motor in the center and efficient ventilation cannot be performed.

(b) Ventilation of a small hole is impossible.

[0004]

[Means for Solving the Problem]

Although there was a revolving shaft in the center, the shaft was removed, the inner plate of (\*\*) and the bearing of (Ha) have played the role of a revolving shaft, it becomes an electromagnet, and the electromagnet coils A, B, and C of (b) oppose with the permanent magnet of (b), and suit [ when a current is passed from the electrode of (Li), it passes along the collecting brush of (e), and ], the rotor plate of (d) and the electromagnet coil of (b) rotate, and the conventional motor turns into a motor. It will become a ventilating fan if the fan of (j) is attached in the rotor plate of (d) at this.

[0005]

[Function]

If a current is passed through a collecting brush from the electrode of (Li), the electromagnets A, B, and C of (b) rotate and it becomes a motor, and the fan of (j) will take lessons from the rotor plate of (d), and it will become a ventilating fan.

[0006]

[Example]

Hereafter, the example of \*\*\*\* is explained.

The inner plate of (\*\*) which fixes the permanent magnets A and B of (\*\*) to the shell plate of (\*\*) (Ha)

Rolling friction is canceled at bearing.

If a current is passed through the collecting brush of (e) from the electrode of (Li), a current flows, and it will oppose with the permanent magnets A and B of (b), and will suit, rotor plate (d), collecting-brush (e), and electromagnet coil (b)s A, B, and C will rotate the (b) electromagnet coils A, B, and C, and it will become a motor. If the fan of (j) is attached to a (d) rotor plate at this, it will become a ventilating fan, and the ventilating fan whose center is a cavity is made.

[0007]

[Effect of the Device]

Since the central motor was removed, efficient ventilation can be performed and can also perform ventilation of a small hole.

---

[Translation done.]

**\* NOTICES \***

JPO and NCIP are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

---

**TECHNICAL FIELD**

[Industrial Application]

This design is the ventilating fan which removed the motor from the center of the conventional ventilating fan.

[0002]

---

[Translation done.]

\* NOTICES \*

JPO and NCIP are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

PRIOR ART

[Description of the Prior Art]

It is the ventilating fan which has a motor in the center.

[0003]

---

[Translation done.]

**\* NOTICES \***

JPO and NCIP are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

**EFFECT OF THE INVENTION**

---

[Effect of the Device]

Since the central motor was removed, efficient ventilation can be performed and can also perform ventilation of a small hole.

---

[Translation done.]

**\* NOTICES \***

JPO and NCIP are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

**TECHNICAL PROBLEM**

[Problem(s) to be Solved by the Device]

This had the following faults.

- (b) There is a motor in the center and efficient ventilation cannot be performed.
- (b) Ventilation of a small hole is impossible.

---

[Translation done.]

**\* NOTICES \***

JPO and NCIP are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

**MEANS**

**[Means for Solving the Problem]**

Although there was a revolving shaft in the center, the shaft was removed, the inner plate of (\*\*) and the bearing of (Ha) have played the role of a revolving shaft, it becomes an electromagnet, and the electromagnet coils A, B, and C of (b) oppose with the permanent magnet of (b), and suit [ when a current is passed from the electrode of (Li), it passes along the collecting brush of (e), and ], the rotor plate of (d) and the electromagnet coil of (b) rotate, and the conventional motor turns into a motor. It will become a ventilating fan if the fan of (j) is attached in the rotor plate of (d) at this.

[0005]

---

[Translation done.]

**\* NOTICES \***

JPO and NCIP are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

**OPERATION**

---

[Function]

If a current is passed through a collecting brush from the electrode of (Li), the electromagnets A, B, and C of (b) rotate and it becomes a motor, and the fan of (j) will take lessons from the rotor plate of (d), and it will become a ventilating fan.

[0006]

---

[Translation done.]

**\* NOTICES \***

JPO and NCIP are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

**EXAMPLE**

**[Example]**

Hereafter, the example of \*\*\*\* is explained.

The inner plate of (\*\*) which fixes the permanent magnets A and B of (\*\*) to the shell plate of (\*\*) (Ha)

Rolling friction is canceled at bearing.

If a current is passed through the collecting brush of (e) from the electrode of (Li), a current flows, and it will oppose with the permanent magnets A and B of (b), and will suit, rotor plate (d), collecting-brush (e), and electromagnet coil (b)s A, B, and C will rotate the (b) electromagnet coils A, B, and C, and it will become a motor. If the fan of (j) is attached to a (d) rotor plate at this, it will become a ventilating fan, and the ventilating fan whose center is a cavity is made.

[0007]

---

[Translation done.]

**\* NOTICES \***

JPO and NCIP are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

**DESCRIPTION OF DRAWINGS**

[Brief Description of the Drawings]

[Drawing 1] It is the front view of the motor of this design.

[Drawing 2] It is the side elevation of the motor of this design.

[Drawing 3] It is the front view which followed the fan of this design.

[Drawing 4] It is the side elevation which followed the fan of this design.

[Description of Notations]

- (\*\*) Permanent magnets A and B,
- (b) Electromagnet coils A, B, and C
- (c) Bearing
- (d) Rotor plate
- (e) Collecting brush
- (\*\*) Shell plate
- (g) inner plate
- (h) Cavity
- (i) Electrode
- (j) Fan

---

[Translation done.]

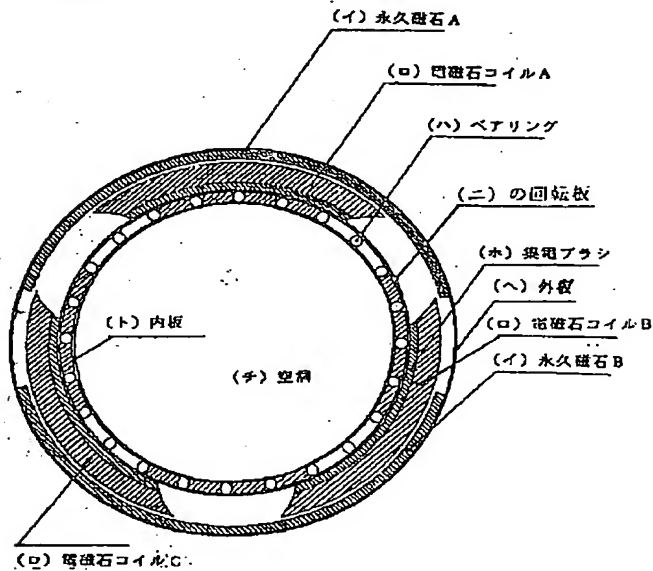
\* NOTICES \*

JPO and NCIP are not responsible for any damages caused by the use of this translation.

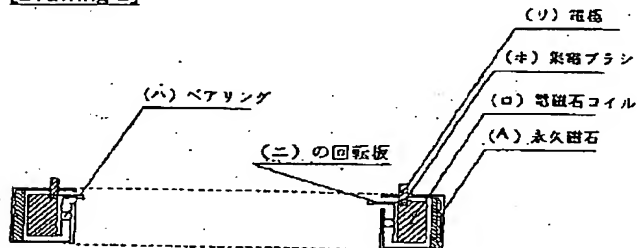
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

DRAWINGS

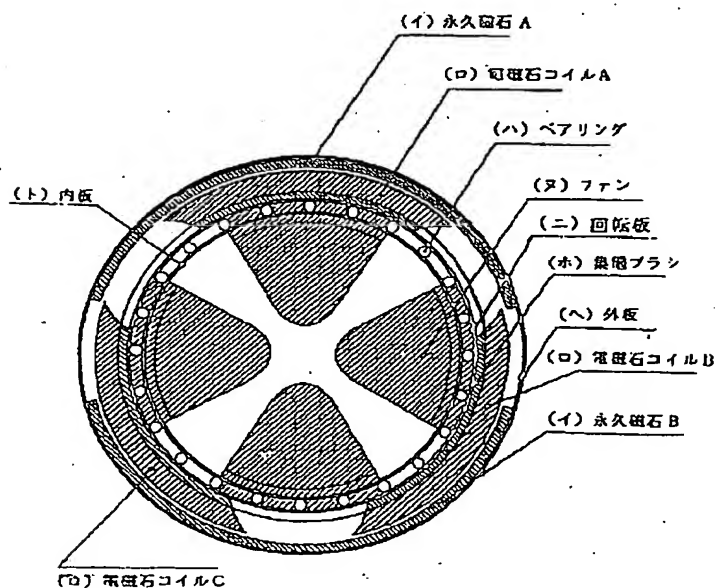
[Drawing 1]



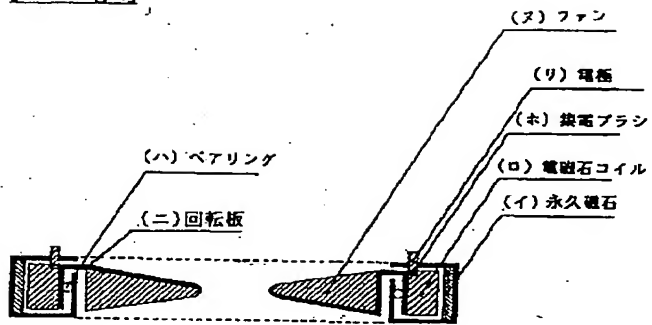
[Drawing 2]



[Drawing 3]



[Drawing 4]



[Translation done.]

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**